

## **Special Radiological Conditions (Jun 2002)**

All work which is performed or scheduled to be performed by the Subcontractor within a radiation controlled area shall be in accordance with the following provisions:

### **A. Compliance with Procedures**

The Subcontractor shall insure that all persons under its control, comply with the regulations and procedures pertaining to control of radiation and/or contamination which are set out or provided for herein or in other provisions of the subcontract.

### **B. Allowable Exposure Limits**

It is expected that each individual will be permitted to work in a radiological control area a minimum of forty (40) hours during any seven (7) consecutive days without exceeding the established permissible limits of radiation as specified in DOE Order 5480.11. The Subcontractor shall manage the work to insure the limit is not exceeded. The Subcontractor shall be responsible for being aware of each employee's current radiation exposure status before assigning radiation zone work and for controlling each of its employees' exposure to ionizing radiation below 1.5 rem per calendar year.

Individuals under 18 years of age shall be excluded from radiation control areas.

In any case where the external exposure status of an individual becomes uncertain, or when administrative controls have been exceeded due to an unplanned amount of radiation dose, the individual(s) involved shall be prohibited from further radiation work.

All exposures to radiation shall be maintained as low as reasonably achievable.

### **C. Modification of Regulations**

If the type or amount of radioactive material encountered is different than expected, the University may modify or change regulations pertaining to radiation exposure limits, boundaries, permissible exposure rates, protective clothing, and exposure time of personnel. If such changes are beyond the control and without the fault or negligence of the Subcontractor, and such changes cause an increase or decrease in the Subcontractor's cost of or time required for performance of the work, an equitable adjustment shall be made in accordance with the General Provisions.

### **D. Suspension of Work**

The University may require suspension of all or part of the work in progress if unfavorable radiation control practices or conditions are detected, such as the following:

- Potential of contamination resulting from excessive winds or uncovering of surface contamination.
- Increase of working personnel dose rates above anticipated levels resulting from inadequate control of process control factors or other unanticipated problems beyond the control and without the fault or negligence of the Subcontractor.
- Noncompliance with Radiation Controls/Procedures or potential of contamination resulting from poor work practices by the Subcontractor.

Work will not be resumed until a satisfactory resolution is determined by the Contract Administrator after consultation with the Subcontractor and Radiation Control representatives.

If the conditions requiring such suspension of work are beyond the control and without the fault or negligence of the Subcontractor and such conditions cause an increase or decrease in the Subcontractor's cost of or time required for performance of the work, an equitable adjustment shall be made in accordance with the General Provisions.

### **E. Radiological Training and Medical Examination**

1. The Subcontractor shall require all persons under its control to attend an orientation session prior to their initial entry into a Radiation Control Area. The Subcontractor shall require all personnel to attend daily safety briefings (approximately 15 minutes) prior to start of each day's work.
2. A completed Medical Clearance Statement signed by an OSHA approved Medical Doctor, shall be submitted to the Contract Administrator for each employee prior to their first day of any work on-site of work on this project. A sample Medical Clearance Statement is included herewith as Appendix 1. Respirator fittings need to be fitted in accordance with an OSHA approved program and approved by the Contract Administrator.

3. All time spent by Subcontractor's employees in orientation, radiation training and medical examinations shall be at the expense of the Subcontractor.
4. The Subcontractor shall be aware of the time required to perform necessary radiation protection steps when in radiation control areas. Examples of some of the time requirements follow:
  - a) Respiratory fitting, approximately 2 hours per person.
  - b) Protective clothing and/or equipment donning, approximately 1 or 2 hours per day.
  - c) Radiation Protection orientation, up to 4 hours per session.
5. All personnel working in radiation control areas where respiratory protection is required, or may be required, and all personnel required to be fitted for respiratory protection shall remove facial hair prior to beginning work in the radiation control area or appearing for fitting of the respiratory protection.

F. Control of Personnel Entering a Radiation Control Area

1. Unless otherwise directed by the University, the Subcontractor shall not permit any person under its control to enter a Radiation Control Area unless a University representative is present to specify the protective clothing and radiation instruments to be used, to provide radiation monitoring services, and to provide any other necessary service with respect to control of radiation and/or contamination.
2. Personnel Log - The Subcontractor shall have and maintain a daily log of all work in a radiation area. The log shall include a description of the work item and the names of personnel assigned to each work item, and be made available to the Contractor Administrator as requested. The Subcontractor shall provide the following information for each person prior to assignment of work in a radiation area:
  - a) Name
  - b) Social security number
  - c) Previous radiation exposure history

G. Furnishing of Protective Clothing

All protective clothing required by Subcontractor personnel for work inside Radiation Control Area will be furnished at the job site by the University.

H. Use of Protective Clothing, Personnel Items and Dosimeters

1. All persons working in or entering a Radiation Control Area will be required to wear protective clothing. Removal of outer personal clothing may be required.
2. Personal items normally worn and/or carried in clothing pockets shall be removed prior to entering/working in the Radiation Control Area. These items include watches, rings, jewelry, keys, knives, etc.
3. All persons will be required to carry, in the prescribed manner, dosimeters while within the Radiation Control Area. Note: Dosimeters shall be exchanged on a monthly basis. The Contractor's personnel shall cooperate with the University during the time required for the exchange of dosimeters and for weekly gamma pencil dosimeter readings if needed.
4. The Contract Administrator will determine the requirements for and provide all necessary equipment for proper respiratory protection in a radiation control area.

I. Control of Personal Habits

The Subcontractor shall require all persons under its control to comply with the regulations forbidding employees to eat, drink, smoke or perform any act involving the transfer of any item from the hands to the body while within a Radiation Control Area. Personnel will be allowed to smoke, drink, and use toilet facilities in a designated area only upon the removal of the outer layer of protective clothing (if two layers of protective clothing are required) and completion of a radiation survey for possible contamination. Personnel will not be allowed to eat food of any type within the Radiation Control Area. Food may be consumed outside of the Radiation Control Area only after complete removal of ALL protective clothing and the completion of a radiation survey for possible contamination.

J. Temporary Construction Facilities

The Subcontractor shall locate its offices, latrines, lunchroom, and all other facilities not essential within a Radiation Control Area, in areas designated or approved by the University outside of the Radiation Control Area.

K. Control of Personnel Leaving Radiation Zone

The University will survey all persons leaving a Radiation Control Area for possible contamination. This survey will require approximately one (1) to five (5) minutes per person per exit. The University will periodically survey all Subcontractor personnel for possible contamination whether or not a Radiation Control Area is established within the Subcontractor's work area. Any decontamination services required will be performed by the University. All Subcontractor personnel assigned to work in a radiation control area shall submit bioassay samples, or participate in necessary tests, as requested by the Contract Administrator, or his/her designated representative. Samples of testing will be done by the Laboratory's Health, Safety, and Environment Division. The bioassay programs or tests may include, but not be limited to, the following:

- a) Urine samples
- b) Nose swipes
- c) Whole body count

L. Decontamination of Individuals

Should contamination be detected on a person being surveyed, the individual will be properly decontaminated. All decisions regarding extent of contamination and control measures to be applied will be made by the University.

M. Disposition of Contaminated Personal Property

1. The Subcontractor agrees to submit to the University for survey and decontamination, if necessary, and for destruction or other disposal if the University should determine that decontamination is impracticable, any equipment, tools, or other personal property brought into the Radiation Control Area by the Subcontractor, its employees, and any subcontractor and its employees.
2. The necessary survey for detection of contamination will be performed immediately prior to the removal of any property from a Radiation Control Area and may also be performed before the movement of any such property from any location within LANL.
3. An equitable adjustment, excluding profit, in the subcontract price will be made for all work performed by the Subcontractor, at the direction of the University, in connection with decontamination of equipment. An equitable adjustment will also be made in the subcontract price for any personal property of the Subcontractor, its employees, and any lower-tier subcontractor and its employees, lost or damaged as a result of contamination not due to their fault or negligence.